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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,546	08/09/2001	Toshiaki Takase	Q65791	1990

7590

06/23/2003

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EXAMINER

GUARRIELLO, JOHN J

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924546

Applicant(s)

Tafase et al

Examiner

John Guarnello

Group Art Unit

1971

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 8/9/2001
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-16 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-16 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

16. Claim 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what encompasses the claimed “non-woven fabric” since the claims merely set forth physical characteristics desired in this battery separator, and do not set forth specific compositions of the non-woven fabric which would meet such claimed characteristics. It is the Examiner’s position that the claims are vague, indefinite and functional since they cover any conceivable combination of characteristics either presently existing or which might be discovered in the future which would impart the claimed

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desired characteristic of the claimed invention of a battery separator, see Ex parte SLOB, 157 USPQ 172 (BdPatApp&Int 1968).

In claim 3, line 3, it is not clear what the term “type” encompasses since this term is indefinite regarding the meaning of composite.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al. 6,284,680 in view of JP-11-126595.

Aikawa describes a non-woven fabric made from fibers which are not substantially fibrillated and have a diameter of less than 20 microns wherein fusing a fiber web comprising fine fibers (corresponding to the ultrathin fibers of the claimed invention) with diameter of 4.0 microns or less with adhesive fibers having a diameter from 8.0 microns to less than 20.0 microns, (see

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abstract). Aikawa describes the pore size, (column 3, lines 39-63). Aikawa describes the fibers can be polyolefin, in particular polypropylene, (column 4, lines 27-35). Aikawa describes this non-woven can be used for a battery separator, (column 23, line 1-4). Aikawa differs from the claimed invention because it is silent about the limitations of claims 4, 7-9, and 12-14.

JP'595 describes a battery separator which is made from ultrathin fibers([0022] of the translation) into a non-woven fabric (which corresponds to the claimed nonwoven fabric of the claimed invention), (see abstract). JP'595 describes the thickness is between 0.05-0.12 mm.([0018] of the translation), which thickness overlaps the thickness of the claimed invention which is 0.10 mm., or less, (see abstract). JP'595 describes fibers with a fiber diameter of 1-7 microns(claim 7 of the translation) which overlaps the claimed invention of 4.0 microns or less. JP'595 describes a sheath core fiber, (see claim 2 of the translation). JP'595 describes a polyolefin material for the component of the battery separator, (see claim 9 of the translation).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the limitations of the claims of 4, 7-9 and 12-14 because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980) especially since the art of record exemplifies the fiber and size of the fiber.

Double Patenting

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,284,680. Although the conflicting claims are not identical, they are not patentably distinct from each other because these are obvious variants of the claimed invention especially since the only apparent difference is the preamble "battery separator".

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21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Guarriello whose telephone number is 703-308-3209. The examiner can normally be reached on Monday to Friday from 8 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John J. Guarriello:gj

Patent Examiner

June 11, 2003



TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700